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REMARKS/ARGUMENTS

Claims 1-20 are pending in the above-captioned application. Of these, claims 1-3, 7-11, and 17-20 stand rejected, and claims 4-6 and 12-16 are withdrawn from consideration. No new amendments to the claims have been made with this paper.

I. Claim rejections under 35 U.S.C. § 102(e) as allegedly anticipated by Parce et al. (US 5.942.443)

Claims 1-3, 7, 9-11, and 17-20 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Parce et al. (US 5,942,443). This rejection is respectfully traversed.

With regard to independent claims 1 and 17, at a minimum, Parce et al. do not teach "a broad channel with a narrow channel within the broad channel, wherein the narrow channel is deeper than the broad channel." The Examiner alleges on page 4 of the current Office action that Figures 3 and 4 of Parce et al. illustrate structures corresponding to Applicants' narrow channel within a broad channel. The Examiner has stated parallel reaction channels 312–324 of Parce et al. correspond to Applicants' claimed narrow channel, and sample injection channel 304 corresponds to Applicants' claimed broad channel. The Examiner then alleges, "As shown in figure 3, the parallel reaction channel is within the sample injection channel, and is 'deeper' than the sample injection channel, and in addition the bead flow into the parallel reaction channel."

First, Applicants wish to note the usual and customary definition of "within." As an appendix to this response, Applicants provide all four definitions of "within" given in Merriam-Webster's Online Dictionary, 10th Edition. Synonyms are given as "inside [of]" or "enclosed [by]." The Examiner will find essentially the same definitions in, for example, The American Heritage® Dictionary of the English Language; Encarta® World English Dictionary, North American Edition; and Compact Oxford English Dictionary.

Applicants have claimed "a broad channel with a narrow channel within the broad channel." As the definitions show, a narrow channel within a broad channel is a narrow channel in the interior of (inside of) or enclosed by a broad channel. Applicants refer the Examiner to Figures 4A–4C of the present application, which illustrate a broad channel having two narrow channels within the broad channel. The channel is best seen in Figures 4B and 4C, where narrower, deeper channels 4045 and 4050 are seen within the broad channel that is shown

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extending from 4060 to 4070. As is clearly seen in Figure 4B, the broad channel extends across the two narrow channels, enclosing the narrow channels in the interior of the broad channel.

Referring now to Figures 3 and 4 of Parce et al., it is clear that none of the parallel reaction channels 312–324 is within the sample injection channel 304. All of parallel reaction channels 312–324 intersect sample injection channel 304. They are not inside of or enclosed by sample injection channel 304. As indicated by arrows 340 in Figure 3, and as described in column 16, lines 38–58, compounds are serially injected into sample injection channel 304 and are then directed into, and assayed in parallel in, reaction channels 312–324. Thus, a sample passes out of sample injection channel 304 and into reaction channels 312–324. Reaction channels 312–324 are not within sample injection channel 304.

Applicants are confused as to why the Examiner specifically noted seeding channel 306 and collection channel 308 of Parce et al. If the Examiner intended that these, when combined with sample injection channel 304, represent a single, broad channel, Applicants must respectfully disagree with this interpretation. Channels 304, 306, and 308 are three separate channels in fluid communication with different fluids. The nature or composition of the sample that flows in through channel 304 is different from that of the processed or reacted sample that flows out through channel 308. An entirely different fluid, e.g., a biochemical system, is introduced through channel 306, as shown by arrows 342, and mixes or interacts with the test compound flowed in through channel 304. See column 17, lines 3–15.

Thus, Parce et al. do not teach every aspect of the claimed invention either explicitly or impliedly, nor do they show the identical invention claimed by Applicants in as complete detail as is contained in independent claims 1 and 17. Withdrawal of the rejection of these claims under U.S.C. § 102(e) as being anticipated by Parce et al. (US 5,942,443) is, therefore, respectfully requested.

Claims 2, 3, 7, and 9-11 depend directly or indirectly from independent claim 1, while claims 18-20 depend directly from independent claim 17. Therefore, Applicants respectfully submit that these dependent claims are allowable for at least the same reasons as set forth herein with respect to independent claims 1 and 17. Withdrawal of the rejection of dependent claims 2, 3, 7, 9-11, and 18-20 under U.S.C. § 102(e) as being anticipated by Parce et al. (US 5,942,443) is also respectfully requested.

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Conclusion

For the foregoing reasons, Applicants believe all the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned attorney.

Respectfully submitted,

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Signed: am C. Veluser